

**For the Patient: BRAJAC****BR = Breast****AJ = Adjuvant****A = Doxorubicin (also known as ADRIAMYCIN®)****C = Cyclophosphamide****Uses:**

- AC is a drug treatment given after breast cancer surgery (called adjuvant chemotherapy) in the hope of destroying breast cancer cells that may have spread to other parts of your body. This treatment may reduce the chance of your breast cancer coming back and may improve your overall survival or chance of a cure.
- AC is offered to women who have had breast cancer that has not spread. AC is not used for women with serious heart problems.

**Treatment Plan:**

- Your treatment plan consists of 4 chemotherapy cycles. Each cycle lasts 3 weeks (= 21 days). For each cycle, you will have an injection in the vein (IV) on the day following your doctor's appointment. You will return in 3 weeks for the next cycle.
- The IV treatment takes about 45 minutes. However, on day 1 of each cycle, you may need to spend some time before you chemo appointment for a blood test.
- Drugs:
  - Two drugs (doxorubicin and cyclophosphamide) are given as an IV injection in your arm on day 1 of each cycle.
  - You take anti-nausea pills to help prevent nausea and vomiting. The anti-nausea prescription is filled at your drugstore.
- A blood test is done either on the day of your doctor's appointment or the day of your chemotherapy. The dose and timing of your chemotherapy may be changed based on your blood counts and/or other side effects.
- If needed, radiation therapy and/or hormonal therapy starts after your last chemotherapy cycle is finished.

**Instructions:**

- Bring your anti-nausea drugs with you to take before each IV treatment. You also need to take your anti-nausea drugs at home. It is easier to prevent nausea than treat it once it has occurred, so follow directions closely.
- Drink lots of fluids if possible (8-12 cups a day).

- Call your cancer doctor immediately (day or night) at the first sign of any infection but especially if you have a fever over 38°C or 100°F.
- Check with your doctor or pharmacist before you start taking any new drugs. Other drugs such as allopurinol, cimetidine (TAGAMET®), digoxin (LANOXIN®), fluoroquinolones, phenobarbital, phenytoin (DILANTIN®), and warfarin (COUMADIN®), may interact with AC.
- You may drink small amounts of alcohol, as it will not affect the safety or usefulness of your treatment.
- Tell other doctors or dentists that you are being treated with AC before you receive any treatment from them.
- Use birth control (but **not** birth control pills) if you could become pregnant. Do not breast feed.

### **Serious & Important Side Effects:**

**Unexpected and unlikely side effects can occur with any drug treatment. The ones listed below are particularly important for you to be aware of as they are known to be directly related to the common actions of the drugs you are to receive.**

- **Infection:** The number of white blood cells that help fight infections will be lowered. Your blood count should return to normal by day 1 of the next cycle. You will need to have a blood count done before each treatment to ensure that your blood count has recovered. If your white blood cell count becomes very low you could get a serious infection. The chance of a serious infection is approximately 5-8%. The risk is greatest between days 10 and 21. **If you have a fever over 38°C or 100°F, call your cancer doctor immediately (24 hours a day) or go immediately to your nearest Hospital Emergency and tell the doctor you are on chemotherapy.**
- **Heart Failure:** Rarely, doxorubicin can have an effect on the heart in some patients causing failure of the heart's pumping action which results in shortness of breath, fatigue and leg swelling. This can sometimes develop years after treatment. Your heart function may be tested and your AC chemotherapy stopped or interrupted if there are concerns about your heart function during the first 2 months.
- **Tissue or vein Injury:** Doxorubicin can cause tissue injury if it leaks out of the vein while it is being given. Report any sensation of burning or pain to your nurse immediately.
- **Early menopause:** If you are still having menstrual periods, AC may cause your ovaries to stop working, resulting in menopausal symptoms such as hot flashes and infertility. Your periods may stop. This may be permanent, especially if you are 40 years of age or older.
- **Leukemia:** After chemotherapy, there is an increase in the risk of leukemia, a cancer of the white blood cells. The risk is about 1% or less after this type of chemotherapy.

**Common Side Effects and Management:**

SIDE EFFECT	MANAGEMENT
<p><b>Nausea and vomiting</b> can occur with this treatment and you will need to take anti-nausea drugs at the time of the injections and at home.</p>	<p>You will be given a prescription for anti-nausea drugs to take before your IV treatment and afterwards at home.</p> <ul style="list-style-type: none"> <li>• It is easier to prevent nausea than treat it once it has occurred, so follow directions closely.</li> <li>• Refer to the following pamphlets: <i>For the Patient: Practical tips to help manage nausea; Food choices to help control nausea.</i></li> </ul>
<p><b>Weight gain</b> may occur during treatment.</p>	<p>Do not try to lose weight during treatment.</p> <ul style="list-style-type: none"> <li>• If you are feeling well, eat a varied and balanced diet and keep active.</li> <li>• Choose lower fat foods if you are eating frequently to relieve nausea.</li> <li>• Ask to see a nutritionist or refer to <i>A nutrition guide for women with breast cancer.</i></li> </ul>
<p><b>Hair loss.</b> Your hair will fall out 2-4 weeks after treatment begins. Your scalp may feel tender. You may lose hair on your face and body. Your hair will grow back once your treatments are over and sometimes between treatments. The colour and texture of the new hair growth may be different.</p>	<ul style="list-style-type: none"> <li>• Shaving the head may be more comfortable.</li> <li>• Avoid hair spray, bleaches, dyes and perms.</li> <li>• Apply mineral oil to your scalp to reduce itching.</li> <li>• If you lose your eyelashes and eyebrows, protect your eyes from dust and grit with a broad-rimmed hat and glasses.</li> <li>• Consider cutting your hair short before it falls out</li> <li>• Ask your nurse about information on wigs and head coverings.</li> </ul>
<p><b>Mouth sores</b> may occur a few days after chemotherapy treatment and may last days or weeks. Mouth sores can occur on the tongue, gums, and the sides of the mouth or in the throat.</p>	<ul style="list-style-type: none"> <li>• Brush your teeth gently after eating and at bedtime with a very soft toothbrush. If your gums bleed, use gauze instead of a brush. Use baking soda instead of toothpaste.</li> <li>• Try baking soda mouth rinses (using 1/4 tsp baking soda in 1 cup warm water) and rinse several times a day. Try ideas in <i>Easy to chew, easy to swallow food ideas.</i></li> <li>• Tell your doctor about a sore mouth, as your chemotherapy doses may need to be decreased if mouth sores are severe. Call your doctor if you are having difficulty eating or drinking due to pain.</li> </ul>

SIDE EFFECT	MANAGEMENT
<b>Fatigue</b> is common especially in the first week after your treatment. As the number of treatment cycles increase fatigue may get worse or last longer.	<ul style="list-style-type: none"> <li>Your energy level will improve with time after treatment is completed.</li> <li>Refer to pamphlet <i>Fatigue/Tiredness</i>.</li> </ul>
<b>Injection site pain</b> or tenderness may occur where the needle was placed and it may extend up the arm.	<ul style="list-style-type: none"> <li>Apply cool or warm compresses or soak in cool or warm water for 15-20 minutes several times a day.</li> </ul>
<b>Irritated and watery eyes</b> can occur.	<ul style="list-style-type: none"> <li>Use of artificial tears may help your eyes.</li> </ul>
You may notice a <b>metallic taste</b> in your mouth.	<ul style="list-style-type: none"> <li>Chew gum, suck on a candy or have a strong flavoured drink if the taste is bothersome.</li> <li>Try baking soda mouth rinses (using 1/4 tsp baking soda in 1 cup water) before or between meals</li> <li>Refer to pamphlet <i>Food ideas to cope with taste and smell changes</i>.</li> </ul>
<b>Pain affecting joints</b> of the hands, knees and feet can occur following chemotherapy.	<ul style="list-style-type: none"> <li>Your family doctor can help you to manage symptoms of joint pain.</li> </ul>
Your <b>skin may darken</b> in some areas such as your hands, elbows, knees or along your veins.	<ul style="list-style-type: none"> <li>This will slowly return to normal once you complete treatment.</li> </ul>
Your <b>urine may be pink or reddish</b> for 1-2 days after your treatment.	<ul style="list-style-type: none"> <li>This is expected as doxorubicin is red and is passed in your urine.</li> </ul>

**If you experience symptoms or changes in your body which have not been described above that worry you or if any symptoms are severe, contact \_\_\_\_\_ at telephone number \_\_\_\_\_**